in patients with duodenal ulcer, a higher incidence of arches was observed in patients with constipation and abdominal pain and chronic intestinal pseudoobstruction. Our findings suggest that dermatoglyphics may have a role in the investigation of gallstone diseases.

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References

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Number of breath samples required for detection of lactose intolerance by lactose hydrogen breath test

The hydrogen breath test (HBT) is a sensitive, specific and noninvasive test for the diagnosis of incomplete carbohydrate digestion and absorption. Although the original procedure involved confinement of patients in a continuous collection-rebreathing system, modern procedures generally involve interval sampling of breath H₂ after a carbohydrate load. There is no consensus on the frequency and duration of collection of breath samples. Therefore, this prospective study was conducted in an attempt to determine the ideal number of breath samples required for the detection of lactose intolerance by the lactose HBT.

The study was conducted in 375 patients (197 men, 178 women; aged 15-75 years, mean (SD) 45 (9.5)) suspected to have lactose intolerance on clinical grounds. Each patient was given 50 g lactose, and the HBT was performed by the standard method. Patients showing high fasting value and early peak (suggestive of bacterial overgrowth) were excluded from analysis.

Two hundred and thirty six patients (62.9%) had abnormal HBT (>20 ppm rise in H₂ over fasting value). Analysis of fasting breath H₂ samples and an additional sample at 1/2 h, 1 h, 1 1/2 h, 2 h, 2 1/2 h, 3 h, 3 1/2 h and 4 h detected abnormality in 7.2%, 39.4%, 60.2%, 83.5%, 85.8%, 88.5%, 88.6% and 85.2% of patients, respectively. When the results of the tests at fasting and from 2 h to 4 h were pooled, all the abnormal cases were detected; no other combination of readings gave such an outcome.

An uncomfortable feature of the lactose HBT has been the need for analysis of a large number of samples. Abramowicz et al. showed that estimation of breath H₂ in fasting samples at 2 h picked up all abnormal cases; estimation at only 2 h gave a positivity rate of 94.8%. These results were not reproducible.

Our results suggest that for the diagnosis of lactose malabsorption, breath H₂ samples should be estimated at fasting and at 1/2 hourly intervals between 2 h and 4 h.

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Comparative evaluation of serology and polymerase chain reaction for hepatitis C viral infection in liver diseases

The diagnosis of hepatitis C virus (HCV) infection in acute and chronic liver diseases rests on the detection of the viral genome by polymerase chain reaction (PCR) and/or detection of specific antibodies by ELISA. We compared the results of these methods.

The study group consisted of 212 patients with acute viral hepatitis (AVH; n=71), fulminant hepatic failure (FHF; 42), subacute hepatic failure (SAHF; 10), chronic active hepatitis (CAH; 17), cirrhosis of liver (62) or hepatocellular carcinoma (HCC; 10). Hepatitis A virus (HAV) infection was diagnosed by detection of IgM anti-HAV antibodies in 11 patients (15.2%) with AVH and 22 (4.7%) with FHF. Hepatitis B was diagnosed by detection of HBsAg
Table: Results of ELISA and PCR in various liver diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>No. of patients</th>
<th>NAB</th>
<th>Anti-HCV (ELISA)</th>
<th>HCV RNA (PCR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVH</td>
<td>71</td>
<td>42</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>FHF</td>
<td>42</td>
<td>18</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SAHF</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>CAH</td>
<td>17</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>62</td>
<td>44</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>HCC</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

NAB = non A, non B

and/or IgM anti-HBc antibody in 18 patients (25%) with AVH, 22 (52.3%) with FHF, 6 with SAHF, 9 with CAH, 20 (31.2%) with cirrhosis and 4 with HCC. Sera samples which tested negative for the above markers were tested for HCV by a second-generation ELISA test (Pinnacle Biosoystm, USA) and HCV RNA by PCR (Table). PCR was more frequently positive than ELISA.

Newer antibody tests, including third-generation ELISA and RIBA tests,1,2 particle agglutination tests,3 and IgM anti-HCV test4 are quite sensitive and specific and can diagnose HCV infection early. The RIBA-2 test can detect anti-HCV antibody at 11 weeks and always within 20 weeks from the onset of infection.5 But this is too long a period for a patient with FHF.

HCV is a more important etiologic agent in chronic liver diseases, and in these patients anti-HCV detection by ELISA may be used as a routine diagnostic modality.

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Improvisation of indigenous pneumatic dilator

We had reported earlier the use of an indigenous pneumatic dilator developed by us.1 We have now incorporated certain modifications:

1. A single condom is as effective as the three condoms used earlier as balloon; this avoids the possibility of puncture of the two inner condoms and entrapment of air in the outer condom, thereby preventing deflation of the dilator after the procedure.

2. The tied ends of the silk cloth are covered with pieces of latex tubing; this protects the thread from getting wet during the procedure and later while washing the dilator, and rules out the possibility of loosening of the thread.

3. The lumen of the Levin's tube is blocked with a metal ball and cyanocrylate glue, which is more effective than other adhesives.

4. The center of the dilator is marked with a black cloth ring, this helps in positioning the dilator at the gastroesophageal junction during dilatation under endoscopic guidance.

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Partington's pancreaticojejunostomy does not need modification

Bapat et al3 have described a modification of the Partington-Rochelle modification of the Puestow-Gillesby procedure, where they have anastomosed the jejunum side-to-back to the pancreas, rather than the conventional side-to-side method. They claim that this “avoids closure of the jejunal end, a potential site of leak if there is distal obstruction,” and that the fish-mouthing effect created better drainage.

I am not, however, aware that leakage from the terminal stump of the jejunum is indeed a frequent complication. In our series of over 160 pancreaticojejunostomy operations, we have never encountered this problem. The authors failed to show in their literature review that this is a serious problem which needs correction. Should distal obstruction occur, the pancreatic anastomosis would disrupt long before the jejunal suture line. If, on the other hand, the stump were to give way first, it would be a blessing as it might be easier to correct.

The authors have also concluded that the modification provides a “dependent, wide, funnel-shaped, Roux-en-Y anastomosis” and therefore it is superior. It is rather presumptive that an end-to-back anastomosis would allow